RNA Methodologies: A Laboratory Guide for Isolation and Characterization; by Robert E. Farrell, Jr., Academic Press; San Diego, 1993; xiv + 317 pages. £37.00, $49.95 (spiral bound). ISBN 0-12-249700-7.

It is my impression that there has been a distinct improvement over the past 10 years or so in the standard of methodology books, and in the proportion of such books that can be recommended with little or no reservation. This book continues the trend and, indeed, has some advantages over most similar books since it is not multi-authored and is, therefore, written in a uniform style. Moreover, the author obviously has considerable expertise in the methods he describes, and experience of teaching them.

The book begins with several brief chapters outlining the structure, synthesis and role of the various forms of RNA, which nicely serve to set the scene, as it were. This section also includes a useful discussion of the factors (temperature, salt, etc.) that have a critical influence on nucleic acid structure, all of which have a bearing on later chapters describing the principles of electrophoretic separations, Northern blot and dot-blot analyses, and nucleic acid hybridization techniques. Description of the problems caused by nucleases, and the methods commonly used to eliminate them, precede a long chapter describing methods for isolating RNA from mammalian cells and yeast, and another on mRNA isolation. The special problems of nuclear RNA isolation and fractionation are covered separately, and a chapter is devoted to methods of measuring gene transcription rates. The book ends with a glossary of terms, an adequate index, and a number of appendices describing some other useful methods.

The strengths of this book include the breadth of its coverage, the detailed protocols described in easily followed, numbered steps, the rationales that begin most chapters, and the clear indication of the important aspects of individual steps of protocols so that pitfalls can most readily be avoided – and the temptation to take short-cuts resisted. Weaknesses? No really important ones, though inevitably most readers will find some favourite method missing. For myself, I was disappointed that the RNAase protection assay was no more than mentioned when the S1 nuclease assay (which I regard as inferior) was given a chapter to itself, that there was no protocol for primer extension analysis of mRNA, and that all the protocols for RNA isolation began with cultured cells, much easier to deal with than solid tissues, especially tumours, which have their own peculiar problems. However, such omissions will surely be rectified in the next edition. In the meantime, this book can be recommended as being very useful to both accomplished practitioners and learners at all stages. The only drawback is the one that has to be cited all too often: the price, which is more likely to keep the book in the library than put it where it belongs, on the bench – will publishers never heed this cry?

G.D. Birnie

Specificity of Proteolysis; by B. Keil, Springer-Verlag; Heidelberg, 1992; ix + 336 pages; DM 258.00. ISBN 3-540-53118-1.

This volume is a compendium of information on proteinases; on their specificity requirements, susceptibility to inhibitors, synonyms and misnomers. Such material is most usefully compiled in computerised form in a data base and indeed just such a companion LYSIS, managed by another programme DIGEST, may also be obtained apparently from Springer-Verlag.

This volume attempts to compile a lot of previous work into tabular form. It is manifestly a very worthwhile and praiseworthy task to attempt for, if successful, it would be of inestimable value in this age of biotechnology, fusion constructs and protein engineering. Sadly most of the data are taken from very old papers; 2,185 references are included but very few of these date from after 1985! And much has happened to proteinases in that time. That is not to imply that older publications are without value; quite the contrary, many have stood the test of time and do provide invaluable information. But many of the review articles cited by the author are very old and not especially helpful therefore. Much recent information is just simply lacking. This in itself negates the value of such a 'bible' but this is further compounded by the errors contained therein. These are many-fold; some are even horrific. Synonyms for chymosin (p. 126) are listed as rennin and *chymase*. It is somewhat ironic that to avoid confusion between rennin and renin and to prevent dairy technologists gate-crashing hypertension meetings, chymosin should have been so (re-)named; only to be mistaken for a mast cell serine proteinase. Undoubtedly inflammatory! Gastricsin is listed with no synonyms yet the confusion over the various terminologies used to describe it (pepsin C, Pepsin II, Pepsin 5, etc.) is legendary. Pepsin B is (cited as) a diphosphorylated form of pepsin A while readers can find out the most up-to-date information on cathepsin E (for exciting, of course) by reading the two reviews cited from 1970 and 1971, respectively.

There may well be much that is valuable in this catalogue; indeed the compilation of references from the 1950–1970 period is admirable. But how is the uninitiated reader to know what is reliable, what has been superseded and what is just plain wrong? Databases, in hard copy or computerised format, are only as valuable as the errors they contain.

John Kay